

Prairie Dog Ecology

Learner Outcomes

The Learner will

- Examine the role of the prairie dog in the environment.
- Display an understanding of the role of the prairie dog as a keystone species.
- Analyze the symbiotic relationships involving prairie dogs.

Background

As a *pioneer species* like the antelope, bison, and elk, the prairie dog played an important role in the prairie ecology of North America. The symbiotic relationships involving prairie dogs were essential in maintaining a viable prairie ecosystem. As a keystone species, the loss of prairie dog populations affects the health and even survival of other species.

Materials

- Supplements numbers 3.16 through 3.23
- Biology textbooks
- Overhead projector
- Video (*The Mysterious Black-footed Ferret*)
- VCR
- Large sheet of butcher paper (approximately 3 x 6 inch or more)
- Old magazines, internet pictures, drawings and colored pencils
- Scissors, glue and transparent tape

Assessments

- Post-test
- Work sheets
- Group projects
- Group presentations

Activity #1
Pre test
20 minutes

Procedure

The teacher will

- Administer the pre-test.

Activity #2
Overview
1 class period

Procedure

The teacher will

- Instruct students to define terms as they listen to the lecture, view the transparencies and use their biology textbooks.

Activity #3
Video
1 class period

Procedure

The teacher will

- Instruct students to answer questions on the work sheet while watching the video.

Activity #4
Relationships
1 class period

Procedure

The teacher will

- Divide students into work groups of four to construct a table of relationships.
- Have students present information obtained and collectively produce a comprehensive list.

Activity #5
Symbiosis
30 minutes

Procedure

The teacher will

- Instruct students to complete the symbiosis work sheet using the above materials.
- Discuss the symbiotic relationships with the class and have students compile a list of examples.

Activity #6
Food Webs
2 class periods

Procedure

The teacher will

- Divide students into groups of four or less to construct a food web using the above materials.
- Allow students to work together to compile information obtained to construct a large mosaic.
- Have students summarize by discussing the importance of food webs.

Activity #7
Summary
25 minutes

Procedure

The teacher will

- Instruct students to summarize the role of the prairie dog in the ecosystem.
- Encourage students to develop a stewardship ethic and an appreciation of the prairie dog's role in the ecosystem.

Activity #8
Post-test
20 minutes

Procedure

The teacher will

- Administer the post-test to assess knowledge gained.